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**ENVIRONMENTAL PROTECTION ACT 1990, PART I**

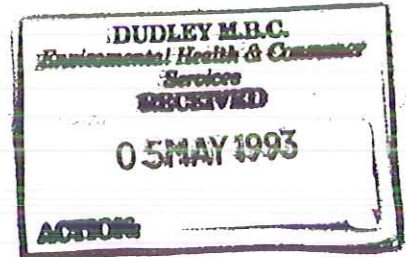
**THE ENVIRONMENTAL PROTECTION (PRESCRIBED PROCESSES AND SUBSTANCES REGULATIONS 1991, SI [472]**

**THE ENVIRONMENTAL PROTECTION (APPLICATIONS, APPEALS AND REGISTERS) REGULATIONS 1991, SI [507]**

**APPLICATION FOR AUTHORISATION UNDER SECTION 6 OF THE ENVIRONMENTAL PROTECTION ACT 1990**

1 Either Name and address of applicant\*

STAFFORDSHIRE CRYSTAL.....  
PEDMORE ROAD.....  
BRIERLEY HILL.....  
WEST MIDLANDS DYS. ITS.....



or

Name, number and registered office of applicant company\* (if applicable)

.....  
.....  
.....  
.....

\* the person/company who will operate the process, not, e.g. the person/consultant who is writing the application on the operator's behalf



2 Name and address of premises where process is or will be carried on  
(not applicable to mobile processes)

..... STAFFORDSHIRE CRYSTAL .....

..... PEATMORE ROAD .....

..... BRIERLEY HILL .....

..... WEST MIDLANDS DYS. ITS .....

3 Address for correspondence if different from 1

..... A/c .....

.....

.....

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4 List of maps or plans enclosed with the application showing the  
location of the premises where the process is or will be carried on

..... AP1 .....

..... AP3 .....

.....

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Where the process is or will be carried on, on only part of the  
premises whose address is given at 2 above, either describe which  
part of the premises or list the plan(s) which identifies these parts

..... AP2 .....

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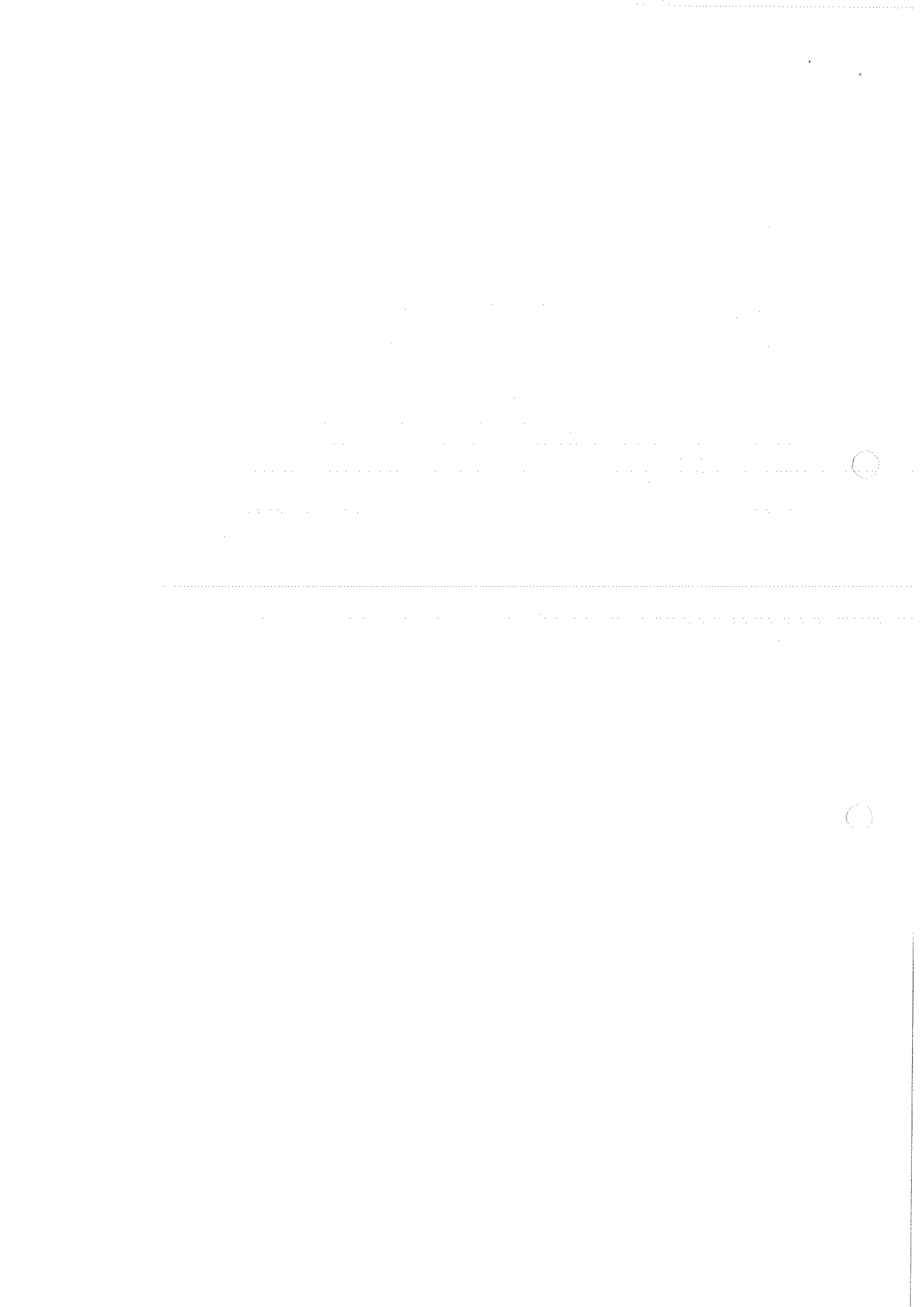
## STAFFORDSHIRE CRYSTAL

Staffordshire crystal manufacture full lead crystal on the premises (Ap 1) at Pedmore Road, Brierly Hill.

Raw materials (Batch Ap 2) are delivered to the site in covered containers each holding 2cwt of batch. The batch is delivered once every 12 weeks and contains 24cwt (12X2cwt). These materials are stored in their containers on site until required for use. Weekly consumption of materials is 2cwt batch 16cwt cullet (broken glass).

The furnaces (2) (Ap 3) used for the melting of the raw materials into molten glass, have been installed during the last four years. They are of the latest design and were commissioned by Bowden & Clarke, Lye, Stourbridge, who are specialist combustion engineers and have worked in close relationship with British Gas Research & Development, Birmingham, on the design of these furnaces. The furnaces are natural gas fired, using covered clay pots for the melting of the glass.

Before glass can be melted the clay pot has to be fired, this entails bringing the pot from room temperature to firing temperature 1400c over an eight day period. This is only carried out once at the beginning of the pots life cycle. Pots life expectancy is six months. Once the pot has been fired the materials are physically shovelled into the pot (18cwt) and the furnace runs at 1400c for 25hrs. During this period the batch is converted into molten glass, at this stage fumes from the melt are at their worst. On completion of the melt the temperature is reduced to 1200c, which is termed working temperature. Melting of the batch is carried out once a week.



At present one furnace is in operation at any one time, normally running a six month campaign. At the close of the campaign, No. 2 furnace then starts its campaign, No. 1 furnace is then closed down. During this closed down period a complete overhaul takes place i.e. broken refractories replaced, burner, recuperator and flue cleaned, valves and safety gear checked, new clay pot installed ready for next campaign. The furnace is overhaul is carried out by Bowden & Clarke.

Melting of batch is carried out once a week 18cwt, half of the companies maximum capacity.

In the event of furnace breakdown, fail safe equipment cuts the supply of gas to the furnace, thus rendering the furnace inoperative.

#### **BLOWING OF GLASS**

The four glassmakers employed have been in the glass trade for at least 20 years thus being highly trained and experienced in the making of crystal glass. They are responsible for the daily maintenance and for keeping the glass at its optimum condition.

The raw materials having melted, temperature of furnace at 1200c. The glass is now ready for blowing. The glassmaker takes a blowing iron (6" iron tube) inserts it into the molten glass and gathers required amount on the end of the iron by twirling the rod, as one would gathering treacle on a spoon. It is then shaped, blown and formed into the required article. The finished piece is then placed into a kiln or oven for the controlled temperature reduction to remove strain from the glass.





The furnaces (Ap 1) are each fitted with its own stainless steel stack. The height of each stack is approximately 32" from floor level. At the present time there is no arrestment fitted to the stacks. The height of the ridge of glasshouse is approximately 28". Emission of fumes from stack as far as we understand contain SO<sub>2</sub>, NO<sub>2</sub>, HF, HO<sub>2</sub>. We have undertaken to have a environmental test carried out (Ap 4) on the furnace at our previous address. We intend to do further monitoring in accordance with authorisation. We also intend to carry out simple in house monitoring and record the results of tests. There is also slight fugitive emissions on the actual filling of the pot with raw materials.

During the past four years that we have been in operation we have never recieved one complaint either formally or informally from our surrounding neighbours. There appears to be no problems from furnace emissions, the emissions being colourless and free from persistent mist.



## RAW MATERIALS

Silica sand	49.70%
Pot Carbonate	16.68%
Lithardye (Lead)	30.35%
Pot Nitrate	2.23%
Borax	0.74%
Cerium Oxide	0.29%



HD MINING BUILDING



80'

30'

FUTURE POLISHING SHOP.

STOCK ROOM.

FUTURE MIXING ROOM.

CUTTING SHOP.

CUTTING MACHINES

CLASSHOUSE.

SHOWROOM

REST ROOM

OVEN.

FURNACE NO 1

FURNACE NO 2

OVEN

OVEN.

OFFICE

OFFICE

LADIES TOILET

MENS TOILET

COMPRESSOR ROOM.

SINK

ROLLER SHUTTER DOOR.

WINDOW

WINDOW

WINDOW



